REMARKS

In the Office Action dated March 29, 2004, claims 29 and 30 were indicated as being allowable if rewritten in independent form.

Claims 1-3, 5-7, 9, 11-13, 16, 18, 20, 23, 24, 26, 33, and 35 were rejected under 35 U.S.C § 102 over U.S. Patent No. 5,754,831 (Berman); claims 8, 17, 19, and 21 were rejected under § 103 over Berman alone; claims 4, 27-29[1] and 31 were rejected under § 103 over Berman in view of U.S. Patent No. 6,028,846 (Cain); claim 30[2] was rejected under § 103 over Berman in view of U.S. Patent No. 6,507,872 (Geshwind); claims 32, 34 and 36 were rejected under § 103 over Berman in view of U.S. Patent No. 6,665,271 (Thomas); and claim 37 was rejected under § 103 over Berman in view of Cain and Thomas.

A minor amendment has been made to claim 1 to improve its form. Note that, due to a typographical error, "overall first performance parameters" in the plural sense was recited. Claim 1 has been changed to now recite "overall first performance parameter" in the singular sense. Note that this amendment of claim 1 makes claim 1 consistent with independent claims 20 and 35 (not amended by this paper). The amendment to improve the form of claim 1 does not change the scope of the claim.

Applicant respectfully submits that claim 1 is not anticipated by Berman. Berman relates to modeling a network, where transmission of messages through the network model is simulated. Berman, 6:35-38. The network model includes a plurality of network elements 310-340, with links between the network elements. Berman, 6:39-45. When a user instructs a modeling task to begin simulation of transmission of a message, a current source transmits a message to a network element over a link. Berman, 7:18-21, 29-32. When a message is transmitted, a transmission time stamp 355 is generated and associated with the message 305. Berman, 7:37-38. The transmission time stamp 355 represents the time that message 305 was introduced into the network model 300. When the message 305 is serviced at the network element 310, a service

[1] It is believed that the rejection of claim 29 over Berman and Cain is a clerical error in view of the indication that claim 29 contains allowable subject matter.
[2] It is believed that the rejection of claim 30 over Berman and Geshwind is a clerical error in view of the indication

time (t) and a utilization accumulator (R*t) is stored in memory. Berman, 7:51-53. Berman states that the service time (t) and utilization accumulator (R*t) are illustrative of transmission indicia. Berman, 7:53-55. Once the message has traversed all network elements, a total transmission time (st) for the message 305 is calculated by determining the difference between the time stamp 355 and a current time stamp 356. Berman, 8:1-5, 12-13.

The calculation of the total transmission time (st) as performed in Berman was equated by the Office Action with combining first performance parameters of respective components to derive an overall first performance parameter. *See* 3/29/2004 Office Action at 5 (citing to column 8, lines 3-7, of Berman as disclosing this element). Note that the total transmission time (st) is calculated by taking the difference between a first time stamp 355 (when the message first enters the network model) and a current time stamp 356 (the time when the message arrives at the end of the network model). Neither of the time stamps 355 and 356 can be considered to be the first performance parameters of respective components. The time stamps represent the time associated with a simulated transmitted message at different points in the network model.

The present Office Action also pointed to the service time (t) and utilization accumulator (R*t) described in column 7, at lines 50-55, as being the first parameters. 3/29/2004 Office Action at 2. However, Applicant notes that this assertion is contradicted by the plain words of Berman itself. Note that the total transmission time (st) is "determined by comparing time stamp 355 with a current time stamp 356 . . . ." Berman, 8:12-14. Berman does not state that either the service time (t) or utilization accumulator (R*t) for the different network elements are combined to derive the total transmission time (st). Rather, Berman states that the total transmission time (st) is based on taking the difference between an ingress time stamp and an egress time stamp.

For at least this reason, Berman does not anticipate claim 1.

Moreover, Berman fails to disclose deriving a *quality indication* of the communication system based at least on overall first and second performance parameters. According to the Office Action's reading of Berman, the overall first performance parameter is the total

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that claim 30 contains allowable subject matter.

transmission time (st), and the overall second performance parameter is the average transmission time (T). *See* 3/29/2004 Office at 5 (citing column 9, lines 7-12, of Berman as disclosing the combining of second performance parameters to derive an overall second performance parameter). There is nothing in Berman to even remotely suggest the derivation of a *quality indication* of the communication system *based on the total transmission time (st) and the average transmission time (T)*. The Office Action has failed to identify with any specificity which item in Berman constitutes the quality indication that is derived based on the total transmission time (st) and the overall transmission time (T). That is because no such quality indication exists in Berman.

For this further reason, Berman does not anticipate claim 1. Independent claims 20 and 35 are allowable over Berman for reasons similar to those of claim 1.

Independent claim 27 was rejected as being obvious over Berman and Cain. The Office Action asserted that Berman teaches the assigning of packet jitter to each of plural components in a communications system. 3/29/2004 Office Action at 13. This assertion is inaccurate, as there is no mention whatsoever in Berman of assigning a performance parameter to each or plural components, where the performance parameter includes packet jitter. Based on this error alone, the obviousness rejection is defective.

The Office Action further stated that Berman teaches deriving a quality indication based on *packet jitters* and packet delays of components. This statement is also inaccurate, as Berman does not describe deriving any quality indication that is based on packet jitters. As discussed above, Berman is concerned about calculating a total transmission time (st) and an average transmission time (T). Applicant notes that the calculation of transmission time of Berman is not concerned at all with packet losses or packet jitters. For this additional reason, the obviousness rejection over Berman and Cain is defective.

Moreover, as conceded by the Office Action, Berman does not disclose a performance parameter that includes packet loss. However, the Office Action relied upon Cain as disclosing the missing feature. It is respectfully submitted that even if Berman can be properly combined

with Cain, the hypothetical combination of Berman and Cain fails to teach or suggest *all* elements of claim 1.

Although Cain refers to a simulator that takes into account packet loss and variable delay, the simulator of Cain is intended to perform a simulation based on user-entered packet loss and variable delay information. The simulator 26 processes packets of data according to the user-entered network conditions, with the results of the simulator analyzed for further development of a real-time application. Cain, 5:52-57. This teaching, however, does not teach the derivation of a quality indication based *on packet losses, packet jitters*, and packet delays of plural components of a communications system. Therefore, the hypothetical combination of Berman and Cain fails to teach or suggest each and every element of clam 27.

Moreover, there is simply no motivation or suggestion to combine the teachings of Berman and Cain. Berman describes the calculation of total transmission time (st) and an average transmission time (T). For the purpose of calculating total transmission time or average transmission time, packet loss and packet jitter are irrelevant parameters. A person of ordinary skill in the art looking to the teachings of Berman and Cain would not have been motivated to modify the teachings of Berman to include packet loss and packet jitter into the calculation of total transmission time or average transmission time. That is because the packet loss and packet jitter information is not needed whatsoever for calculating transmission time parameters.

The present Office Action states that packet loss as taught by Cain "can be factored into the overall quality calculation of Berman . . . . Specifically, packet loss can be applied correctly as part of a simulation to determine network delay as in Berman . . . ." 3/29/2004 Office Action at 3. This statement by the Office Action is based on speculation, with absolutely no suggestion anywhere in Berman or Cain of the desirability of factoring packet loss into the total transmission time or average transmission time calculations of Berman. Note that in Berman, a message is transmitted from one end of the network model to another end of the network model. The total and average times are based on the transit time of *the* message. If this message was lost, then the simulation would fail and Berman would be rendered inoperative for its intended

purposes. In view of the foregoing, it is respectfully submitted that there is no motivation or suggestion to combine Berman and Cain to achieve the claimed invention.

Withdrawal of the obviousness rejection of claim 27 is respectfully requested.

Dependent claims are allowable for at least the same reasons as corresponding independent claims.

Moreover, with respect to claim 28 (which depends from claim 1) the hypothetical combination of Berman and Cain does not teach or suggest combining packet delays of respective components to derive *an overall packet delay*, and combining packet losses of respective components to derive an *overall packet loss*.

With respect to claim 31, which depends from claim 1, the hypothetical combination of Berman and Cain does not teach or suggest assigning a signal loss parameter, an echo parameter, or a noise parameter to at least one of the components, where deriving the quality indication is further based on at least one of the signal loss parameter, echo parameter, and noise parameter. It is clear that neither Berman nor Cain even remotely suggests an echo parameter or a noise parameter. The Office Action equated the packet loss parameter referred to by Cain as being the signal loss parameter. These two parameters are not equivalent. Signal loss is not the same as packet loss. Therefore, the hypothetical combination of Berman and Cain does not teach or suggest each and every element of claim 31.

Claim 8, which depends from claim 1, was rejected as being obvious over Berman alone. The Office Action conceded that Berman fails to disclose deriving a quality indication that includes calculating an E-model quality rating value. It is respectfully submitted that the calculation of transmission times (total transmission time or average transmission time) performed by Berman would not have led a person of ordinary skill in the art to modify the teachings of Berman for calculating an E-model quality rating value. There is simply no suggestion based on the teachings of Berman that would suggest the calculation of parameters other than a total transmission time or average transmission time. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 8.

As stated by the MPEP, "[i]t is never appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based." MPEP § 2144.03 (8th ed., Rev. 1) at 2100-132. "[T]he Board can not simply reach conclusions based on its own understanding or experience--or on its assessment on what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings." *Id.* (citing *In re Zurko*, 258 F.3d. 1379, 1385, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001)). Therefore, if a reference actually exists that suggests a modification of Berman in the manner proposed by the Office Action, Applicant respectfully requests the production of such a reference. Absent the objective evidence required, it is respectfully submitted that the obviousness rejection of claim 8 over Berman alone is defective.

Claim 21, which depends from claim 20, is similarly allowable over Berman, which does not teach or suggest a controller to derive an E-model rating using stored models. A *prima facie* case of obviousness has not been established with respect to claim 21.

Claim 19 was also rejected as being obvious over Berman alone. Applicant respectfully notes that Berman does not contemplate at all the storage of a representation of a circuit-switched device. Berman is focused on a network that includes nodes, links, routers, bridges, gateways, switches, local area networks, and so forth. However, no mention is made whatsoever of including a circuit-switched device. Therefore, there is no motivation to modify Berman to include a circuit-switched device. A *prima facie* case of obviousness has thus not been established with respect to claim 19.

In fact, if a reference exists that suggests a modification of Berman to achieve the invention of claim 19, Applicant respectfully requests the production of such a reference. Absent such a reference, it is respectfully submitted that the obviousness rejection is defective and should be withdrawn.

Dependent claims 32, 34, and 36 were rejected as being obvious over Berman and Thomas. In view of the improper application of Berman against the respective base claims, it is

respectfully submitted that the obviousness rejections of claims 32, 34, and 36 are also defective. The obviousness rejection of claim 37 over Berman, Cain, and Thomas, is also defective in view of the defective rejection of base claim 27 over Berman and Cain.

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (NRT.0049US).

Respectfully submitted,

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